

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A telecommunication system comprising:

a TDM bus;

a system TDM interface comprising means for receiving and transmitting TDM data streams, coupled to the TDM bus, that transmits TDM signals on the TDM bus and receives TDM signals from the TDM bus;

a packet bus;

a system packet communication interface comprising means for receiving and transmitting data packet streams, coupled to the packet bus, that places packet communication cells on the packet bus and receives packet communication cells from the packet bus; and


a format converter comprising means for performing bi-directional conversion between the interfaces conversion unit connected between the TDM bus and the packet bus that performs bi-directional TDM-packet format conversion between the system TDM interface and the system packet communication interface.

Claim 2 (cancelled)

Claim 3 (currently amended): A The system as claimed in claim 2~~1~~, wherein the conversion ~~means~~ unit comprises at least one service-specific adaptation module.

Claim 4 (currently amended): A The system as claimed in claim 1, wherein the system further comprises a system controller ~~comprising means for controlling that controls~~ operation of circuits in the system.

Claim 5 (currently amended): A The system as claimed in claim 4, wherein the system controller is connected to the packet bus.

 Claim 6 (currently amended): A The system as claimed in claim 4, wherein the system controller ~~comprises means for transmitting and receiving~~ transmits and receives system control ~~signal~~ signals via the packet bus to the packet communication interface and the ~~format converter~~ conversion unit, and ~~means for transmitting and receiving~~ transmits and receives system control signals to the system TDM interface via a separate TDM control signal link.

Claim 7 (currently amended): A The system as claimed in claim 6, wherein the control signals are cells such as ATM cells.

Claim 8 (currently amended): A The system as claimed in claim 7 6, wherein the control signals are cells, such as ATM cells, and the system packet communication interface and the ~~format converter~~ comprise means for adding conversion unit add an additional header to each cell to direct routing of the cells within the system.

Claim 9 (currently amended): A The system as claimed in claim 3, wherein each adaptation module comprises a cell processor connected to an adaptation circuit.

Claim 10 (currently amended): A The system as claimed in claim 9, wherein each adaptation module further comprises a control processor, and the cell processor ~~comprises means for routing~~ routes control signal cells to the control processor.

Claim 11 (currently amended): ~~A~~ The system as claimed in claim 10, wherein the cell processor ~~routing means~~ comprises a segmentation and reassembly interface connected to a separate segmentation and reassembly circuit, which is in turn connected to the control processor.

Claim 12 (currently amended): ~~A~~ The system as claimed in claim 11, wherein the cell processor ~~comprises means for stripping strips~~ additional headers from cells as they are routed to the segmentation and reassembly circuit.

Claim 13 (currently amended): ~~A~~ The system as claimed in claim 9, wherein the cell processor ~~comprises means for maintaining~~ maintains a plurality of output queues for routing of cells to the TDM bus, the queues being maintained on a priority scheme according to VPI/VCI headers.

Claim 14 (currently amended): ~~A~~ The system as claimed in claim 13, wherein each cell processor comprises a mapping function for addition of the additional headers.

Claim 15 (currently amended): ~~A~~ The system as claimed in claim 9, wherein the cell processor comprises a dedicated ASIC.

Claim 16 (cancelled)

Claim 17 (currently amended): A telecommunication system comprising:-

a TDM bus;

a ATM bus;

a system TDM interface, coupled to the TDM bus, that transmits TDM signals on the TDM bus and receives TDM signals from the TDM bus ~~comprising means for receiving and transmitting TDM data streams;~~

an a system ATM interface, coupled to the ATM bus, that places ATM cells on the ATM bus and receives ATM cells from the ATM bus comprising means for receiving and transmitting ATM data streams;

a format converter comprising a TDM bus connected to the TDM interface, an ATM bus connected to the ATM interface, and at least one service-specific adaptation module connected between the busses buses that perform bi-directional TDM-ATM and ATM-TDM conversion between the buses; and

a system controller.

Claim 18 (currently amended): A The system as claimed in claim 17, wherein the system controller is connected to the ATM bus and comprises means for communicating communicates with the ATM interface and each adaptation module using cells.

Claim 19 (currently amended): A The system as claimed in claim 18, wherein each adaptation module and the ATM interface comprise means for routing control signal cells with additional headers for internal routing.